



Special points of interest:

- Aquatic Invasive Species
- Lunch and Learn Program
- Lake Superior Day
- Kid's Fishing Derby
- Community Garden

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NEWS FROM THE EARTH

Babaamaajimowin Akiing

FALL 2016

Petition Filed to List Moose "*Mooz*" as Endangered



Photo by USFWS

The U.S. Fish and Wildlife Service (USFWS) recently received a petition from two nonprofit groups to list the Midwestern subspecies of moose (*Alces alces andersoni*) as a threatened or endangered species. The Midwestern moose are found in Michigan, Wisconsin, Minnesota, and North Dakota.

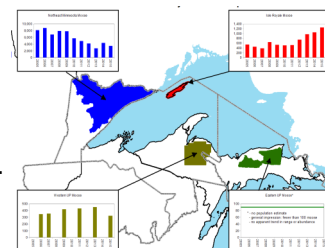
After a 90 day finding period, the USFWS determined that there was enough evidence to move forward with the process. USFWS will now conduct a 12-month status review to determine if listing *andersoni* moose under the Endangered Species

Act is warranted. A 60 day public comment period (which ended August 2nd) was held regarding the decision for USFWS to proceed. The review may not be completed for several years, as there are currently 500 petitioned species waiting for review.

Moose have been impacted by habitat loss, hunting, and other problems for more than a century, and face additional threats with the onset of climate change. Climate change (predicted warmer temperatures for our region) will further reduce habitat, shifting boreal forest northward. The results of cli-

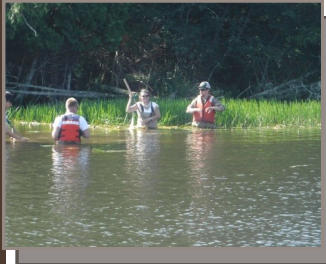
mate change will also cause physical stress such as overheating, which can lead to malnutrition and immune system problems. Warmer temperatures can also cause an increase in diseases and parasites that can harm moose.

USFWS will take all of these problems that moose are facing into consideration during the review process. You can find more information at www.fws.gov



Moose status in the ceded territories

Aquatic Invasive Species (AIS) Program



Beach seining efforts

The NRD AIS Program and Adopted Management Plan are now into a 2nd year of implementation. The AIS program is a great complement to the Fisheries Program. The AIS Program includes Outreach and Education, inspection and sanitation for marine equipment, monitoring and managing existing AIS populations, and a rapid

response plan.

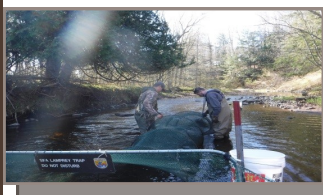
Aquatic Invasive Species are a species that are not native to an area. Once established, they spread quickly, and may cause environmental and economic harm. AIS usually grow quickly and out compete native species, and once established they can be difficult (if not impossible) to control or remove.

NRD staff (Karen Anderson, Jacob Haa-papuro, Patrick LaPointe, Gene Mensch, Peter Morin, and at times others) were busy during the 2016 field season dealing with AIS. Some of the work performed is highlighted in the following articles.

***"all 3 systems
are utilized
for spawning
habitat"***



"business ends" of lamprey



Ravine River sea lamprey

Over the past year NRD staff conducted several sea lamprey surveys and assessments in collaboration with Great Lakes Indian Fish & Wildlife Commission (GLIFWC) and United States Fish and Wildlife Service (USFWS).

Adult sea lamprey traps were set on the Misery, Silver, and Ravine rivers for a 10 week period. The traps showed that all three systems were used for lamprey spawning habitat. Total captures were about half the amount of last year's catch, but this may or may not be re-

flective of the lamprey population trends. The heavy rains that we received this year caused swollen rivers, which affected trapping efficiency. The data collected is useful for research and control efforts. The NRD and multiple other agencies throughout the Lake Superior Basin combine data for analysis.

Larval Stream and Nearshore sea lamprey surveys were conducted by USFWS, with NRD staff assisting. Backpack electrofishing surveys were conducted on the Little Carp Creek and the Otter River. NRD staff took the opportunity to

test out the KBIC electrofishing boat at this time. The boat is running proficiently. NRD staff also observed chemical lampricide (granular bay-lusclide) applications at the Falls River outlet used for nearshore larval lamprey abundance estimates.



"ammocete" (larval) sea lamprey

Sea Lamprey (Continued)

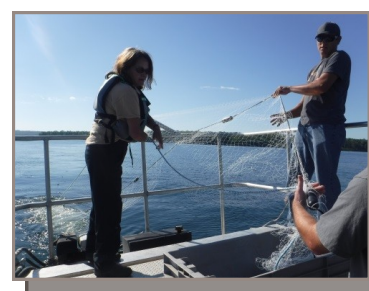
Standardized fishery surveys continue to track sea lamprey wounding rates on all fish species. Sea lamprey attacks are closely monitored and documented. Results of this work are shared with other agencies throughout the Lake Superior Basin, and the Great Lakes Fishery Commission to assist in gaining a lake wide perspective on lamprey attack rates.

In 2016, based on initial review of collected

data, wounding rates are slightly above the acceptable threshold of 5 out of 100 lake trout encountered having lamprey wounds. However, a more thorough analysis of data is needed before formal conclusions can be drawn. In the meantime, NRD staff continue to perform standard fishery surveys to investigate lamprey attack rates and other issues.



Lake Trout with fresh lamprey wound



NRD staff deploy a graded mesh, lake trout survey gillnet

Aquatic Invasive Species (AIS) Early Detection

Our region has around 100 documented exotic species, many of which are considered AIS. There are also several more species threatening to establish here. The NRD has been one of the lead partners of the USFWS working to detect new invasions.

The USFWS has developed an AIS early detection sampling design which is used by several entities (including NRD as a lead) of the Lake Superior region. Areas that have been surveyed include the St. Louis River system, Duluth Harbor, Keweenaw Bay, Huron Bay, Portage waterway,

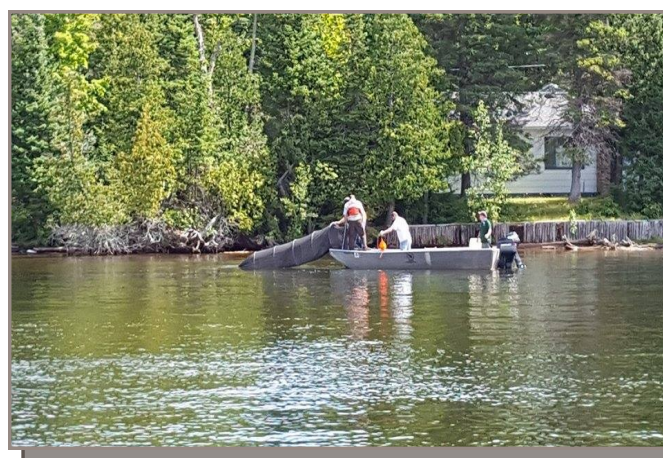
and Marquette Harbors.

Results of the intense Early Detection Surveys in Keweenaw and Huron Bays are preliminary, but the mid-July effort captured more than 6000 individual fish representing 35 different species. The different species included Eurasian ruffe and three-spine stickleback, which are considered AIS. Non-native species that are not considered to be true AIS such as brown trout, rainbow trout, and splake were also captured.

Methods of early AIS detection include gill-netting, trawling, electro-fishing, beach seining, and

fyke netting. The NRD staff is committed to continuing the implementation of this AIS Early Detection Protocol on and near the L'Anse Reserva-

tion, as the best means to stay "in front" of any new establishments of AIS here.



net deployments and recovery at Portage waterway

Brewery Road Site



Corn in the community garden

Community Garden:

It has been another successful year at the Community Garden with a total of 10 community members participating. A few of the members were new to the garden, but most have participated in the past.

Community garden participants had to-

matatoes, beans, squash, lettuces, and many other vegetables planted in the garden. We experienced a good growing season with many of the plants producing well this year.

Hoop House:

The hoop house has been filled with blackberries, raspberries and strawberries. All of which

produced fruit later than usual in the season this year.

Fruit Orchard:

Additions were made to the fruit orchard this year. The orchard contains varieties of apple, cherry, plum, service berry, and peach trees.

Lunch and Learn

“the Lunch and Learn series featured a new topic each month”

In spring 2016, NRD and KBOCC staff created a culture based education program entitled “Lunch and Learn”. The idea came from the very successful Decolonization diet dinner held in 2015.

The Lunch and Learn series featured a new topic each month, and included a lunch prepared by the KBOCC culinary department. The lunch was a simplified version of the Decolonization Diet.

May was the kick off of the 6 monthly sessions with The NRD’s People’s Garden and wild edibles as the topic.

June’s topic was Climate Change and tree

species of concern. There was also a workshop in June on the honorable harvest of Birch Bark and the making of winnowing baskets.

July’s Lunch and Learn coincided with the Lake Superior Day beach clean-up. The topic of the presentation after lunch was Aquatic Invasive Species.

The topic for the August presentation was wild rice education and harvesting, as well as the importance of wild rice to waterfowl.

September was coordinated with MTU researchers presenting on Fish Consumption and Potential Contaminants.

The final Lunch

and Learn of the year was held on October 10th, and featured author Roxanne Dunbar-Ortiz. She discussed indigenous people and the problems that are still faced today due to European colonization. She also discussed some of the progress being made within the United Nations by indigenous people.



May Lunch and Learn



Lake Superior Day-Lunch and Learn

Terrestrial Invasive Species

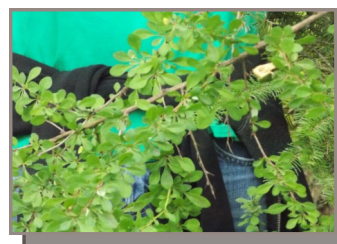
The NRD plants crew continues to work on invasive species removal on reservation land. The plants crew has been working with the Great Lakes Conservation Corp, the Superior Watershed Partnership Youth Workers, and NRD youth workers.

Crews have removed Japanese Barberry, Purple Loosestrife, Spot-

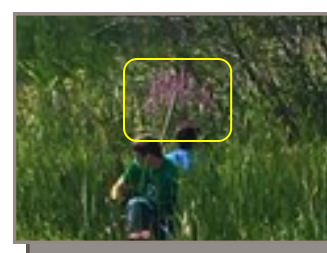
ted Knapweed, and Wild Parsnip.

The NRD has been to numerous trainings on treating and identifying species of concern. If you believe you have found any invasive species, please call:

KBIC-NRD
524-5757
Ext. 23







Japanese Barberry







Purple Loosestrife





Native vs Invasive Identifying plants from the *Apiaceae* family

			
HEIGHT 5 to 8 feet	STEM 1 to 2 inch diameter Deeply ridged, green to slightly purple, fine hairs, fuzzy	LEAF Compound, less incised, 2 to 2 1/2 feet across, fuzzy hairs	FLOWER Whitish flower clusters no larger than 1 foot across

Cow Parsnip is a native species that is phototoxic. It may cause skin irritation.

Giant Hogweed is an invasive species which is phototoxic. It can cause burns and skin irritation, and damage to the eyes.

GIANT HOGWEED			
			
HEIGHT 15 to 20 feet	STEM 1 to 3 inch diameter Purple blotches, stiff bristles	LEAF Compound, lobed, deeply incised; up to 6 feet wide	FLOWER White flowers, flat-topped, umbrella, up to 2.5 feet across

WILD PARSNIP			
			
HEIGHT Up to 5 feet	STEM Yellowish-green with verticle grooves running full length	LEAF Compound, pinnate, 5 to 15 toothed, variably lobed, yellowish-green	FLOWER Single flower stalk with flat-topped umbel of clustered yellow flowers

Wild Parsnip is an invasive species which is phototoxic. It can cause severe rash or blistering of the skin.

Kids Fishing Derby



Champion: Edwin Lopez

The 14th annual kids fishing derby was held in honor of fisherman John Henry "JT" Tolonen who passed away in 2015.

This year 426 fisher kid's registered, with 220 of them catching fish. The weather played a big part in this year's event. The fish (especially bullheads) were looking

for food before the big rain, with a record high of 331 fish registered.

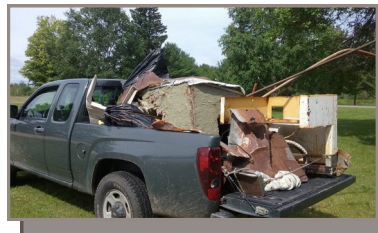
Prizes were being handed out when the big storm hit, and the event had to be cut short. Although the day ended a little early, everyone had a great time and we look forward to next years event.



Fisher kid's lined up along the pond

Lake Superior Day

**"1200 lbs. of
garbage was
collected"**



One truck full of garbage



Kayaking fun after the clean

The NRD held its annual Lake Superior Day beach clean-up on July 15th. Approximately 40 volunteers participated in the clean-up. The volunteers cleaned approximately 7 miles of beaches from Assinins all the way to Pequaming. During the clean-up 1200 lbs. of garbage was collected.

The day was started by KBIC member Debbie Williamson who performed an opening ceremony. The Lunch and Learn series was held

after the clean-up featuring Karen Anderson, KBIC-AIS coordinator. Following the Lunch and Learn, kayaks were provided for some fun.

Lake Superior Day was created in the 1990's by the Binational Forum, and is officially held on the third Sunday in July. Events are held all around the Lake Superior basin to highlight the importance of the world's largest freshwater lake.

The NRD will



Some of the volunteers

continue to hold annual events in honor of Lake Superior Day, but we encourage the community to care for our beautiful lake year round.



Lunch and Learn Presentation

KBIC Youth Conservation Corps Crew - Superior Watershed Partnership

KBIC teens had the opportunity once again this summer to work with the Superior Watershed Partnership and the KBIC-NRD.



Rice processing

Two crews of seven teenagers helped improve our community, while learning about Ojibwe culture, environmental issues, Lake Superior, and the natural resources of our area.

The crews worked on invasive species removal, which included purple loosestrife,



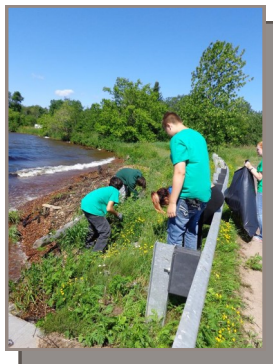
Ride the Wave



Birch bark harvest

spotted knapweed, and barberry. They also helped clean and build trails. The crews assisted NRD staff with the Kid's fishing derby, Lake Superior Day, the community garden, the hatchery, and the wall-eye ponds.

The crews didn't spend all of their time working. They toured both Northern Michigan University and



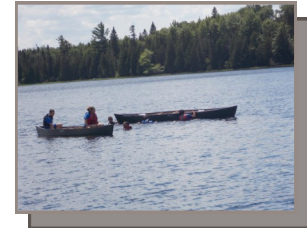
Removing Knapweed

Michigan Tech University. They also attended Wild Rice Camp which included making rice knockers, canoe safety, and poling a canoe. The NRD also held a birch bark workshop where the crew members learned how to harvest bark and make baskets.



Tree planting

After a busy summer they spent their last day on Michigan Tech's Ride the Wave boat learning about the Torch Lake Remediation area. After the boat ride, they



Canoe safety

enjoyed an afternoon of bowling and pizza.

We all look forward to working with the youth again next summer.

"Youth workers learned about environmental issues"



Gardening



Beach clean-up

Keweenaw Bay Indian Community
Natural Resources Department
14359 Pequaming Rd.
L'Anse, MI 49946

Phone: (906)524-5757
Fax: (906) 524-5748

Wild Rice “*Manoomin*”



NRD staff have been busy seeding and surveying wild rice in local waterbodies. Pictured above is an area where the rice seed from previous years is doing quite well.



Seeding wild rice



Surveying wild rice



This moose was spotted in mid-September near the Sand Point area by NRD employee Karen Andersen.